

APPENDIX A

PROPOSED TRANSMISSION LINE AND SUBSTATION MODIFICATIONS

Proposed Transmission Line

Single pole structures would be approximately 65 to 90 feet tall, dependent on terrain and obstructions (**Figure A1**). The two-pole H-frame structures would consist of two poles connected by an "X-brace". A horizontal cross-arm member would be mounted above the "X-brace" and would support the electrical transmission conductors (**Figure A2**). The three-pole dead end/angle structures would consist of three inline poles. The electrical transmission conductors would be connect to insulators attached directly to the pole structure and the conductor jumper around the poles on a horizontal cross-arm member mounted to the three poles (**Figure A3**). The two-pole H-frame structures and the three-pole dead end/angle structures would be approximately 50 to 90 feet tall, depending on terrain or obstructions. Support structures taller than 90 feet may be required at isolated locations to accommodate road crossings, unique geographical features, or other existing overhead utilities. Weathered steel, characterized by a stable, rust-like finish that closely resembles the color of wood poles, would be used for all pole structures.

The pole structures would carry double bundled aluminum conductor steel-reinforced cables that are approximately 1.1 inches (954 thousand circular mils) in diameter. All conductor wires would be at least 22 feet above the ground surface. A shield wire approximately 0.375 to 0.75 inch in diameter would be placed along the top of each pole to protect the transmission line from lightning. Copper ground wires would be affixed to each pole and connected to ground rods that would be buried in the excavation for each pole. The ground wires and rods would enable all of the poles to be electrically grounded. The transmission line would be designed and constructed to meet or exceed the requirements of the National Electric Safety Code; Nevada Administrative Code 704.450: Regulation of Public Utilities, which adopts National Electric Safety Code by reference; and California Public Utilities Commission General Order Number 95: Rules for Overhead Electric Line Construction (State of California, 1998)¹.

Proposed Substation Modifications

The Bordertown Substation would be partially rebuilt and modified with the addition of new components in order to accommodate the transmission line, resulting in approximately 3.7 acres of expansion on BLM-administered public land. **Figure A4** illustrates the changes that would occur at the Bordertown Substation.

To accommodate the new transmission line, parts of the California Substation would be rebuilt and new components would be added. A new 120 kV bus would be constructed at the substation and a new 120 kV transmission line terminal, including all associated switches, telecommunications and protections would be installed. All needed modifications would be accommodated within the existing fenced area of the substation, and the footprint of the existing substation would not be expanded. **Figure A5** illustrates the changes that would occur at the California Substation; however, the exact layout would depend on the selected alternative.

¹ State of California. (1998). *Rules for Overhead Electric Line Construction*. Prescribed by the Public Utilities Commission of the State of California.

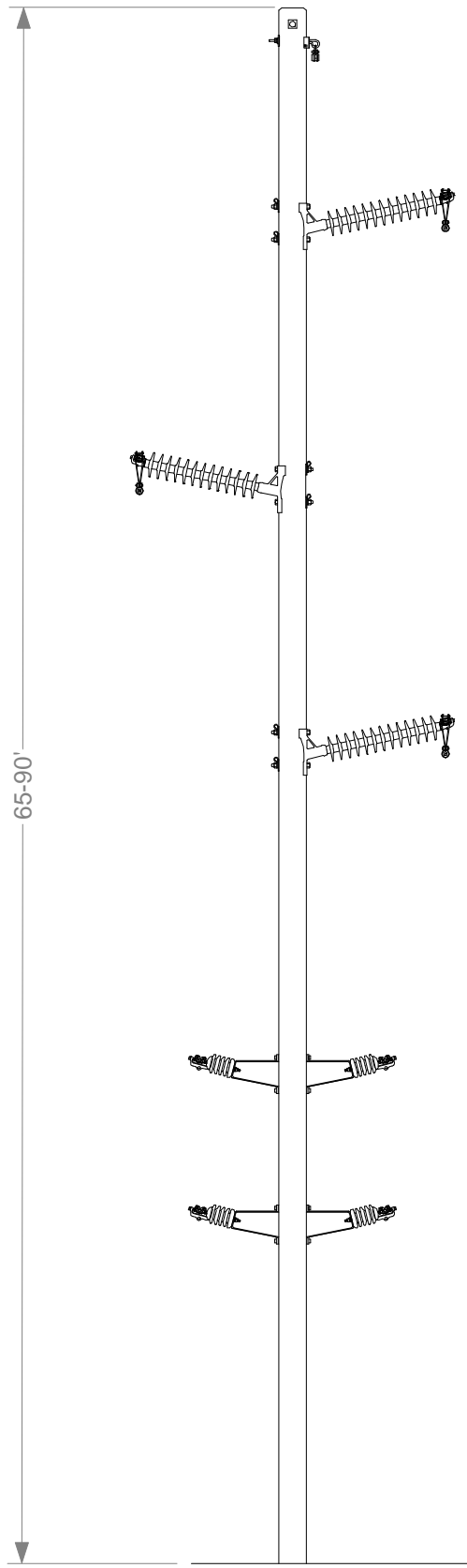


Figure A1
Single Pole Structure Illustration
Bordertown to California
120 kV Transmission Line EIS

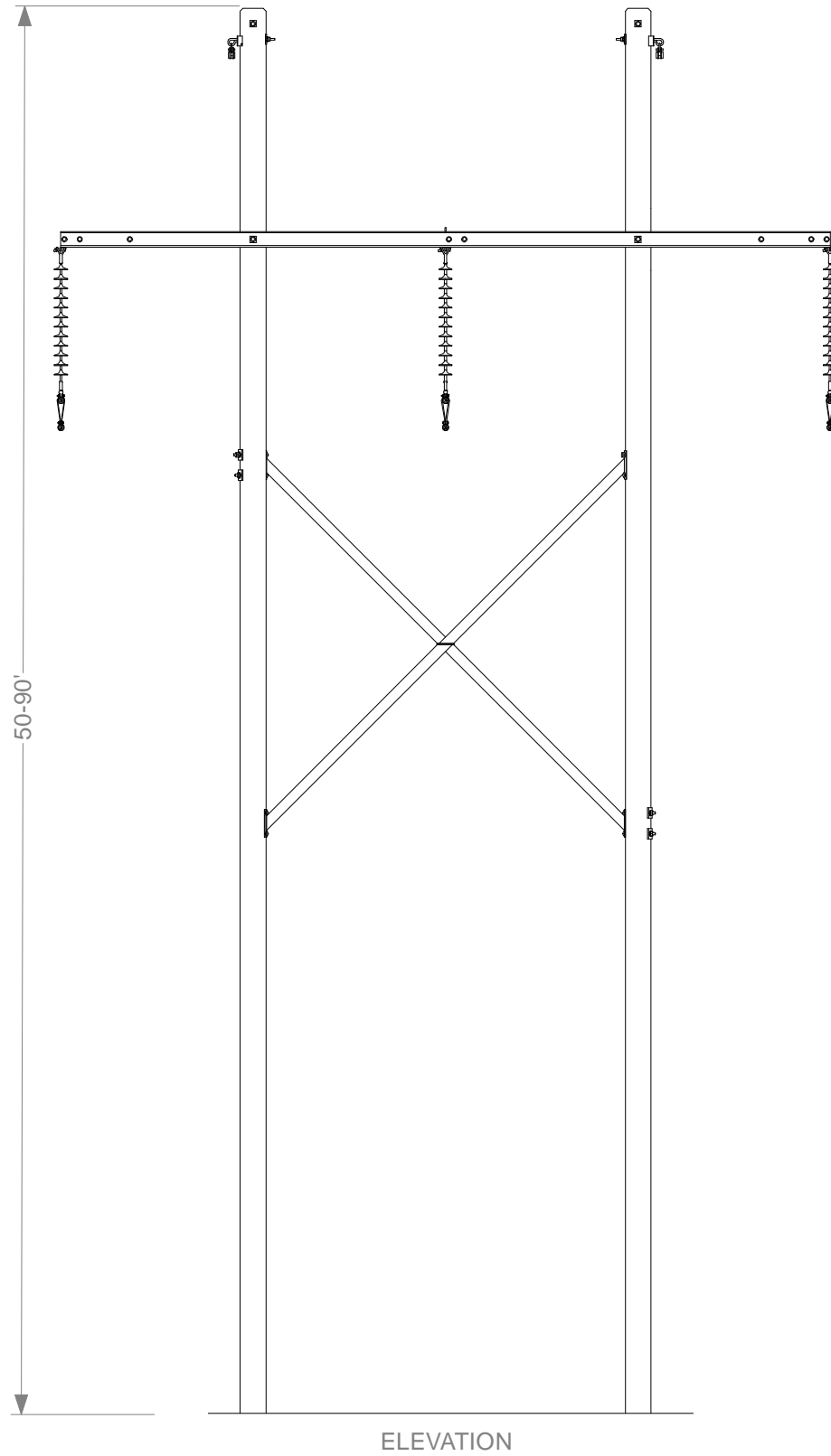


Figure A2
H-Frame Structure Illustration
Bordertown to California
120 kV Transmission Line EIS

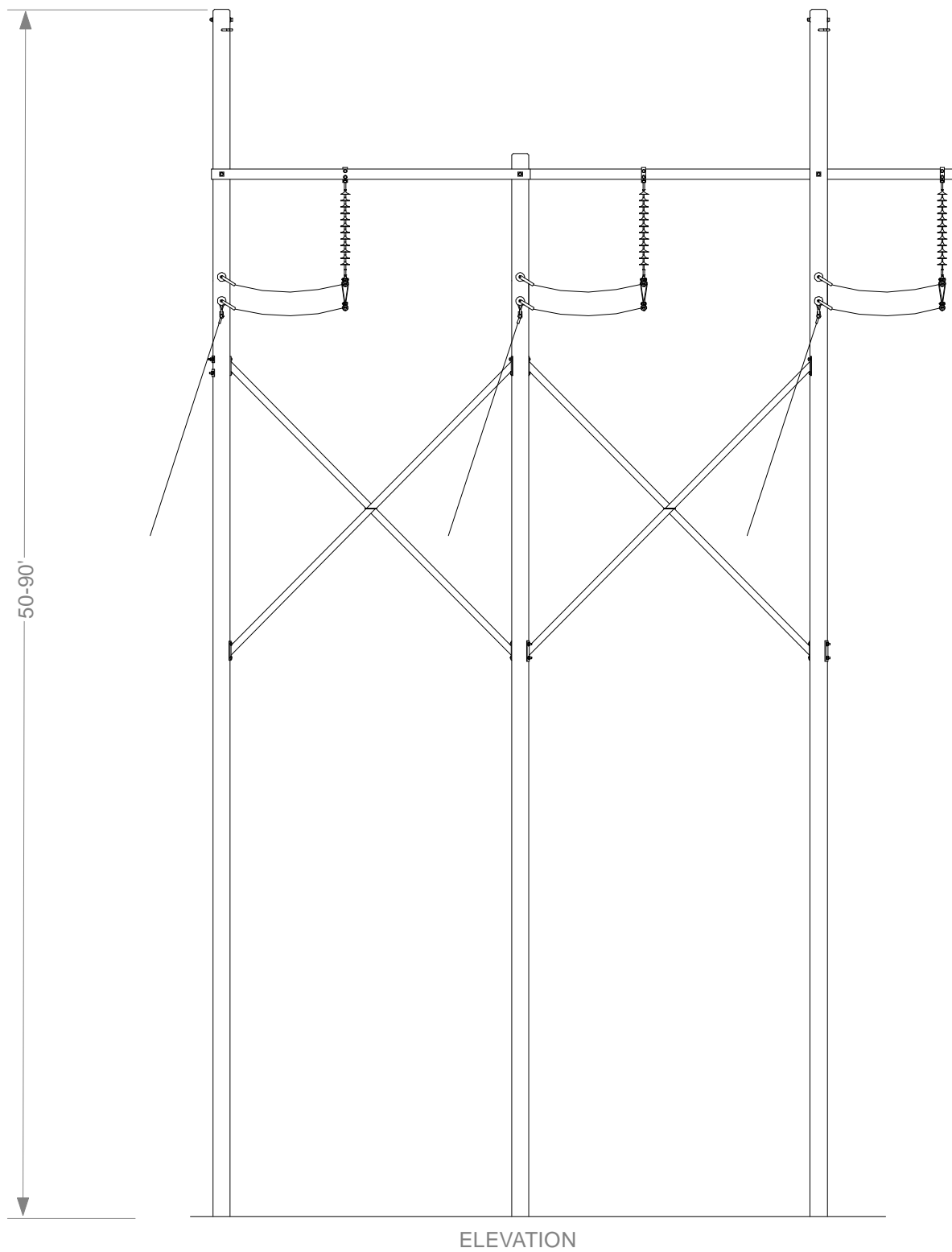


Figure A3
3-Pole Dead-end/Angle Structure Illustration
Bordertown to California
120 kV Transmission Line EIS

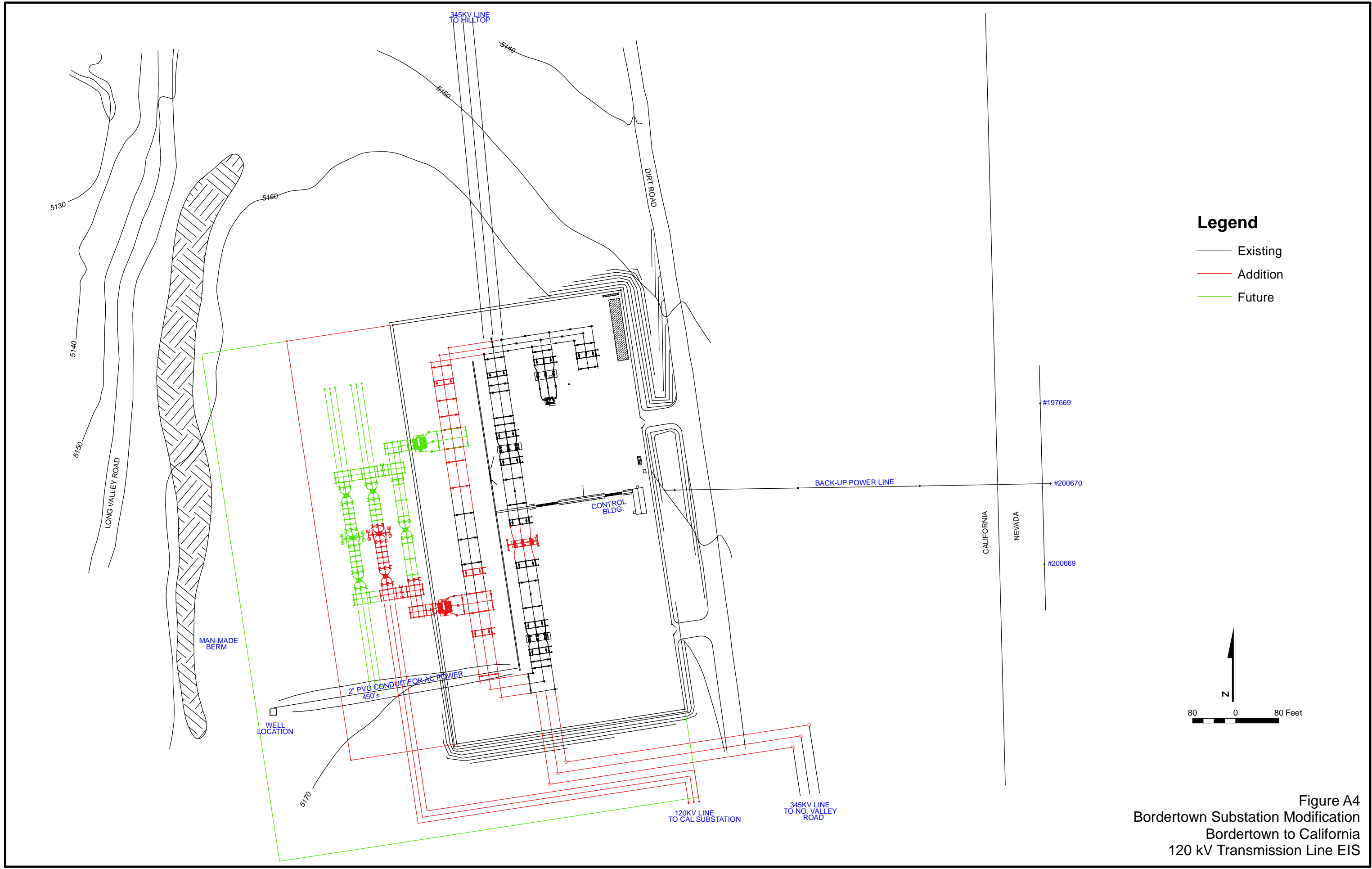
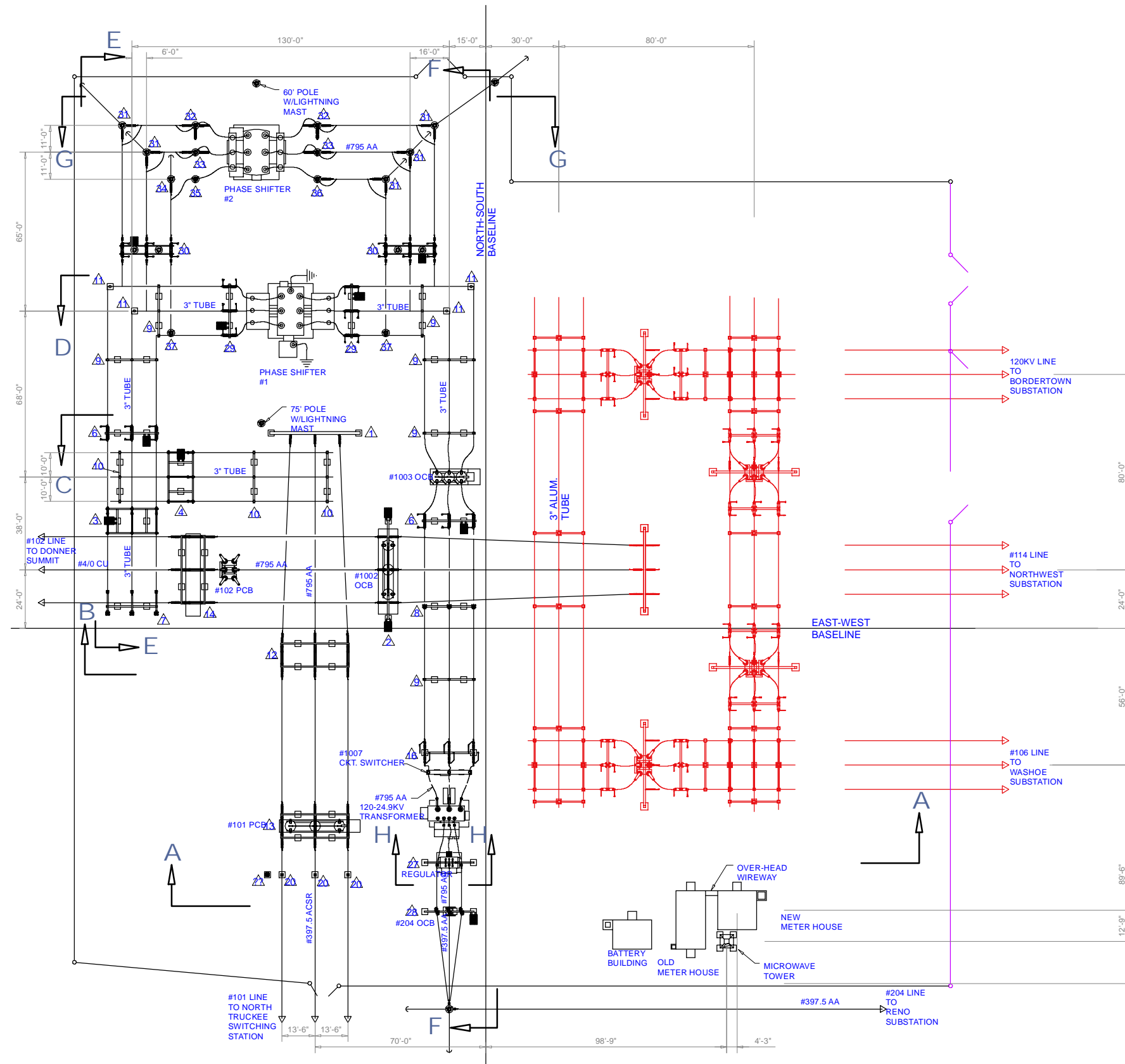


Figure A4
Bordertown Substation Modification
Bordertown to California
120 kV Transmission Line EIS



Legend

- Existing
- Addition
- Existing Fence to be Replaced

Figure A5
California Substation Modification
Bordertown to California
120 kV Transmission Line EIS

APPENDIX B

PROJECT DESIGN FEATURES

1.0 PROJECT DESIGN FEATURES

1.1 DESIGN FEATURES COMMON TO ALL ACTION ALTERNATIVES

Under any of the action alternatives, project design features would be implemented during construction and maintenance to reduce environmental impacts. Design features that would be implemented specific to an alternative are listed in **Section 1.2**.

General Practices (GP)

- GP 1. All environmentally sensitive areas (i.e., culturally sensitive areas, meadows, and special status plant populations) will be temporarily fenced during construction for avoidance.
- GP 2. Prior to construction, all construction personnel will be instructed on the protection of sensitive biological and cultural resources that have the potential to occur on-site by qualified personnel.
- GP 3. Construction activities may require temporary access through existing fences and gates on public and private land. Fencing will be replaced when construction activities are completed. Replacement fencing will be built to agency or landowner specifications, consistent with the fencing that was removed. During construction, fences with open gates will remain open and fences with closed gates will remain closed. Fences crossed during construction will be braced and secured prior to cutting the fence to prevent slackening of the wire.
- GP 4. If blasting is required within proximity to the Kinder Morgan buried gas pipeline located next to Dog Valley/Henness Pass Road between Verdi and “Summit One”, NV Energy will coordinate with Kinder Morgan and use a qualified licensed blaster.
- GP 5. Concrete wash out stations will be pre-approved and the water will be captured and disposed of.
- GP 6. Long-term equipment staging and storage areas will not be located on NFS land.

Noxious Weeds (NW)

- NW 1. Noxious weeds occurring on either the Nevada or California State list will be mapped and the full extent of the population will be treated prior to construction. Inventory and treatment areas on NFS land will extend 100 feet from the ROW and all ground disturbed by project activities. Project disturbances include roads proposed for widening, construction access roads, and vegetation removal, including skid trails and landings.
- NW 2. Monitoring and continued treatment in areas that were treated prior to construction will commence the first full growing season after project implementation. Weed treatment will continue until disturbed areas are successfully restored (see restoration criteria). Weed treatment will also be addressed during maintenance activities.
- NW 3. All equipment utilized off of existing roads and motorized trails will be cleaned with a high pressure power washer of all mud, dirt, and plant parts. Following cleaning, equipment will be inspected for plant parts (e.g., leaves, stems, seeds). Equipment will be cleaned and inspected again prior to re-entry if it leaves the project site. Equipment will be inspected and cleaned again before moving from an area within the project area with known noxious weed species. Inspections will be completed and documented by qualified personnel.

- NW 4. When cut and fill is required to create log landings, topsoil will be stockpiled and covered to prevent weeds from establishing in the soil. This topsoil will be re-spread during restoration of the landings.
- NW 5. Staging areas shall not be located in weed infested areas. Staging areas will be inspected by qualified personnel for pre-approved use to reduce the risk of introducing noxious weeds into the project area.
- NW 6. Construction of access roads will not occur in areas heavily infested with noxious or invasive weeds.
- NW 7. Restoration seed mixes will be certified as weed-free.
- NW 8. All gravel and/or fill material will be certified as weed-free.
- NW 9. NV Energy will coordinate with other county, state and federal agencies to address and treat landscape level infestations of invasive plant species.
- NW 10. When invasive plants are grubbed or manually removed, methods that prevent seed spread or re-sprouting will be used. If flowers or seeds are present, the weed will be pulled carefully to prevent seeds from falling and will be placed in an appropriate container for disposal. If flowers and seedheads are not present or are removed and disposed of as described above, the invasive plant may be pulled and placed on the ground to dry out.

Vegetation (VG)

- VG 1. Placement of the ROW will avoid wherever possible, isolated groups of trees and/or groups of trees with an average diameter at breast height (dbh) of 30 inches or greater as directed/approved by the USFS.
- VG 2. All trees measuring 8 inches or greater in dbh that need to be removed shall be identified by the USFS prior to felling on NFS land.
- VG 3. For trees measuring 8 inches or greater in dbh, stump height shall not exceed 12 inches above ground level on the uphill side or 12 inches above natural obstacles. Trees less than 8 inches in dbh, stump heights shall not exceed 6 inches above ground level on the uphill side or 6 inches above natural obstacles.
- VG 4. Trees identified for removal will be whole tree yarded to log landings for disposal. All logs and slash will be removed from NFS land. Woodchips not needed for restoration will also be removed from NFS land.
- VG 5. Where removal of vegetation other than trees is unavoidable, the vegetation will be cut at ground level to preserve the root structure and allow for potential sprouting.
- VG 6. All areas of temporary ground disturbance that result from the construction or maintenance of the project will be restored as required by the land management agency and per any applicable permits. Restoration will include restoring contours to their approximate pre-construction condition, stabilizing the area, installing erosion control features (such as cross drains and water bars), and seeding and re-vegetating. Revegetation may include incorporation of chips into the soil as needed, installing erosion control features such as installing cross drains and placing water bars in the road.
- VG 7. Successfully restored areas will be defined as:

Reference sites will be pre-established and approved by the USFS. Reference sites will include plant communities that are representative of the ecological site as described by

NFS Matrices. Reference sites must include plant communities that are in a late-seral and ecologically functioning condition.

- VG 8. Project implementation will comply with conditions in Lahontan Water Quality Control Board timber harvest waiver.

Herbicide Use (HE)

- HE 1. Herbicides will be used in accordance with label instructions, except where project design features describe more restrictive measures. An herbicide use plan will be developed and included in the COM Plan.
- HE 2. Prior to the start of application, all spray equipment will be calibrated to insure accuracy of the delivered amounts of herbicide. Equipment used during herbicide application will be regularly inspected to insure it is in proper working order.
- HE 3. Herbicide spray applications will not occur when wind velocity is 5 miles per hour or greater to further minimize the potential for drift.
- HE 4. Herbicide applications will not be conducted during rain or immediately following rain when soil is saturated or runoff or standing water is present. Application will occur only under favorable weather conditions, defined as:
 - a) 30% or less chance of precipitation on the day of application based upon National Weather Service weather forecasting for the Reno area;
 - b) If rain, showers or light rains are predicted within 48 hours, the amount of rain predicted shall be no more than ¼ inch of rain; and
 - c) Rain does not appear likely at the time of application.
- HE 5. Preparation of herbicides for application, including mixing, filling of wands and rinsing of spray equipment, will take place outside of wetlands, meadows, riparian zones, wells and springs, and other sensitive sites, and more than 300 feet from surface water. Herbicide preparation will occur only on level, disturbed sites such as the interior of landings. A water truck would be used to provide water for mixing in the field.
- HE 6. A spill cleanup kit will be readily available whenever herbicides are transported or stored. A spill kit would be carried by the applicator at all times when using the wicking application method.
- HE 7. Low nozzle pressure (<25 pounds per square inch), and a coarse spray (producing a median droplet diameter of >500 microns) will be used in order to minimize drift during herbicide applications.
- HE 8. Prior to treatments in areas of concentrated public use, the public will be notified about upcoming herbicide treatments via posting signs.
- HE 9. The herbicide spray nozzle will be kept as close to target plants as possible (within 20 inches) while achieving uniform coverage in order to limit overspray and drift to non-target vegetation.
- HE 10. Where riparian vegetation communities occur, herbicide application will be limited to directed foliar spray or wiping methods and spray will be directed away from native vegetation.
- HE 11. Herbicide treatments will not occur within 500 feet of sensitive plant occurrences.

- HE 12. Herbicide application within wet meadows will be limited to treating invasive plant infestations that occupy less than 100 square feet. Herbicide applications will be limited to wiping techniques with aminopyralid, chlorsulfuron, and glyphosate and treatment of the following high priority species: Canada thistle (*Cirsium arvense*), Russian knapweed (*Acroptilon repens*) or tall whitetop (*Lepidium latifolium*) which are difficult to eradicate with non-chemical means. Meadows will be surveyed for special status plant species prior to any chemical treatments and will be monitored post-treatment to determine effects to non-targeted vegetation.
- HE 13. Herbicide application will not occur within the established buffers for aquatic features shown in **Table B-1**.

Table B-1 Minimum Buffers (ft) for Herbicide Application Near Aquatic Features

Herbicide	Application Method	Dry Aquatic Features	Streams ¹ or Ditches with Water ²	Wetland or Meadow
Aminopyralid	Spot & directed foliar spray	25	25	100
	Wiping	15	150	15
Chlorsulfuron	Directed foliar spray	25	100	100
	Wiping	15	15	15
Glyphosate	Directed foliar spray or drizzle	0	25	25
	Cut stump or wiping	0	15	15
Imazapic	Directed foliar spray	25	75	75
Triclopyr (TEA)	Directed foliar spray	25	75	75
	Wiping or cut stump	15	15	15
Clopyralid	Spot & directed foliar spray	25	50	50
	Wiping	15	15	15

¹As measured from the edge of the stream channel. If a defined channel is not present (draws do not have defined channels), measurement is from the bottom of the feature.

²As measured from the edge of the wet area or the meadow vegetation, whichever is greater. Limited conditions allowing for herbicide application within meadows are described in HE 17.

- HE 14. Herbicide application is limited to targeted treatments directed at the plant (spot treatments of the immediate area surrounding the plant are allowed with aminopyralid and clopyralid, only) using a backpack sprayer; broadcast spray methods that dispense chemical over a non-localized area will not be used.
- HE 15. Avoid application of Aminopyralid and Clopyralid sprayed mulch materials on revegetation sites.

Forest Health (FH) - Insects and Disease

- FH 1. To reduce the build-up or residual tree mortality by pine engraver beetles (*Ips pini*), and reduce fuel loading the following measures shall occur:
- Whole trees greater than 3 inches diameter at breast height (dbh) (whether in accessible or inaccessible areas) shall be removed (after proper permitting) to established log landings within 6 weeks of cutting. Slash shall be chipped and hauled off of NFS land for disposal. Any incidental breakage during whole-tree yarding that is 3 inches in diameter or greater shall be lopped and scattered to within 18 inches of the ground in open areas.

- b. Timing: In areas where material 3 inches or greater in diameter is left on site, cutting shall only occur from August 1 through December 31. Material must be lopped and scattered to within 18 inches of the ground in open areas. There are no timing restrictions for dead trees or species other than pine.

Water Resources and Soil (WA)

- WA 1. A SWPPP will be prepared to minimize erosion from the project construction worksites and to contain sediment. The SWPPP will be prepared in accordance with the National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit. At a minimum, it will identify the existing drainage patterns of the construction work sites and ROW/easement, nearby drainages and washes, potential pollutant sources other than sediment, and erosion and sediment control measures and BMPs that will be implemented to protect stormwater runoff. The SWPPP will include maps with locations for erosion and sediment control measures, and BMPs. The SWPPP will be kept on site throughout the duration of construction.
- WA 2. Erosion and stormwater controls will be inspected on the ground at least once every seven days and within 24 hours of a storm event of 0.5 inch or greater. Weather forecasts and data available from the National Weather Service in Reno will be used to determine total precipitation associated with a storm event. Qualified personnel of NV Energy or its contractors with specific training in erosion and sediment control will perform the inspections.
- WA 3. Construction equipment staging areas, and storage of equipment fuels will not be located within 300 feet of perennial streams or within 150 feet of seasonally flowing streams (i.e., intermittent and ephemeral streams). Staging areas and fuel storage will also not be located within 150 feet of any other water features, such as wetlands.
- WA 4. Pole sites and staging areas will not be constructed within the 100-year floodplain of any stream or within wetlands.
- WA 5. Construction equipment will not be operated on unstable soils or on soils too wet to adequately support equipment in order to prevent rutting, puddles on soil surface, or runoff of sediments directly into water bodies.
- WA 6. Water drafting (i.e. water withdrawal) from streams will not be permitted. Water shall be provided by truck for dust abatement and other project needs.

Temporary Stream Crossings

- WA 7. Improvements to any existing road crossing will be designed to minimize surface disturbance.
- WA 8. Crossings will be located where the stream channel is narrow, straight, and uniform, and has stable soils and relatively flat terrain. Stream crossings will be oriented perpendicular to the stream channel. All stream crossings will be designed and installed such that sufficient load-bearing strength for the expected equipment is provided.
- WA 9. Stream crossings will be designed for a normal range of flows for the site, and crossings that must remain in place during high runoff seasons will be stabilized. However, all crossings will be temporary and will be removed at the end of the construction season. The water body profile and substrate will be restored when the crossing is removed.
- WA 10. Stream crossings will be regularly monitored while installed to evaluate the condition. Any repairs or improvements to the crossings identified during monitoring will be promptly addressed.

- WA 11. Surface drainage and roadway stabilization measures will be used to disconnect the access road from the stream in order to avoid or minimize water and sediment from being channeled into surface waters and to dissipate concentrated flows.
- WA 12. On perennial streams, existing crossings will be utilized and no new crossings will be constructed.

Plants and Sensitive Plant Communities (SV)

- SV 1. If any Forest Service or BLM sensitive plant or watch list species or federal- or state-listed species are identified during construction activities, the USFS will be contacted within 24 hours. Depending on the plant species appropriate protective measures will be implemented.
- SV 2. Surveys for sensitive vegetation species, wetland areas, and noxious weeds will be conducted for any areas where surface disturbance is planned that were not included in the initial baseline studies.
- SV 3. There will be no new access roads or widening of existing roads for construction access through meadows. This measure would also protect potential habitat for special status plant populations that are found in wetland and meadow habitats, such as Dog Valley ivesia.
- SV 4. Poles, staging areas, and line clearance areas, and any project-related ground disturbance will avoid all special status plant populations.
- SV 5. Where existing roads are used for travel to the project site (but not widened), any road maintenance within 100 feet from special status plant populations would focus on avoiding impacts. A permanent physical barrier, such as lining the roads with rock or fencing the road corridor, would be constructed to prohibit vehicle access to sensitive plant populations and contain travel within the existing road corridor.

Webber Ivesia and Dog Valley Ivesia

- SV 6. Construction of new access roads (i.e., spur roads and centerline travel roads) and widening of existing roads and motorized trails will not occur within 500 meters (1,640 feet) of populations of Dog Valley ivesia (*Ivesia aperta* var. *canina*) and Webber ivesia (*Ivesia webberi*) occurring on NFS land. Construction of new temporary access roads and widening of existing roads and motorized trails will not occur within 200 feet of other special status plant populations that occur on NFS land. Within these buffer distances, travel and road maintenance on existing roads and motorized trails may be permitted but road improvements including widening of the existing travelled way are prohibited.
- SV 7. The transmission line would be excluded from the occupied habitat unit for Webber ivesia populations occurring on NFS land. (Occupied habitat includes the low sage habitat where the plants are present and a 500-meter buffer from the edge of the occurrence. The 500-meter buffer would include low sage and adjacent shrub steppe habitats to accommodate pollinators associated with the rare plant community).
- SV 8. Techniques to span over Webber ivesia potential habitat (i.e., unoccupied suitable habitat) will be evaluated with a USFS botanist. Unavoidable pole placement within habitat will require use of a helicopter. Access roads will not be constructed within potential habitat. Potential habitat includes low sage plant communities with specific habitat attributes: presence of a rocky pavement surface, presence of an argillic soil horizon, plant community composition and presence of associated plants, topographic

position of the site, and, known elevation range. Areas defined as potential habitat will not require the 500-meter buffer.

Wildlife and Sensitive Species (WL)

- WL 1. If any Forest Service or BLM sensitive wildlife or plant species are identified during pre-construction surveys or during construction activities, work in the general area of the identified species will be halted until a USFS biologist or other qualified biologist is consulted to determine an appropriate buffer and other protective measures. The USFS will be notified within 24 hours of the discovery of the species. Buffer distance will be established in consultation with the USFS on a case by case basis depending on species and type and magnitude of construction activity. If avoidance is infeasible, consultation with the USFS, and at its discretion, any cooperating agencies will be contacted prior to continuing work in the immediate area of the species. The same process will be implemented in the event that any federal- or state-listed species are discovered on public land, with the discovery being reported to the USFS or BLM, depending on the respective land administration.
- WL 2. If appropriate, additional surveys for Forest Service sensitive species and other special status species will be conducted prior to construction by a qualified biologist approved by the USFS. Coordination with the USFS will be conducted prior to commencing surveys to determine appropriate survey methodology, timing, and survey area.
- WL 3. To reduce potential disturbance to migratory birds, construction will occur outside the typical avian breeding season (April 1 to July 31). If construction activities cannot be avoided during this time period, surveys will be conducted immediately prior to construction to locate active nesting areas.
- WL 4. If active avian nests are located on NFS land or BLM-administered public land, they will be flagged and avoided until after the breeding period. NV Energy will coordinate with the USFS or BLM biologist to determine appropriate time frames for resuming construction.
- WL 5. Excavations deep enough to potentially entrap wildlife species will be covered and fenced at night or when unattended to prevent livestock or wildlife from falling in. All covers will be secured in place and strong enough to prevent breakage by wildlife.
- WL 6. To avoid impacts to wintering mule deer, construction will not occur between November 25 and May 25 within areas mapped as crucial winter or winter-spring high deer use, including the Mitchell Canyon Deer Management Area. Non-ground disturbing activities, such as surveying, staking, or resource driven activities (e.g., cultural surveys, biological surveys), may occur within this time frame.
- WL 7. To aid in providing browse for wintering mule deer, post construction revegetation in areas mapped as crucial winter and winter spring high use habitat will include seed mix of brush species preferred by mule deer (i.e., bitterbrush, mountain big sagebrush, mountain mahogany, serviceberry, snowberry, and Wyoming big sage) as well as appropriate forbs and grasses.
- WL 8. To protect raptors such as hawks and eagles from electrocution, transmission line and pole structures will be constructed in conformance with the guidelines contained in *Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006*, prepared by the Avian Power Line Interaction Committee (2006).
- WL 9. To limit the potential for impacts to aquatic resources, particularly to Lahontan cutthroat trout, pole sites or roads will not be placed within the 100-year floodplain in drainages

occupied by Lahontan cutthroat trout, specifically Dog Creek and the Truckee River. During construction, no soil disturbing activities will occur within the 100-year floodplain of either drainage.

Cultural Resources (CU)

- CU 1. If previously unidentified cultural resources are found, work will be halted immediately within a minimum distance of 300 feet from the discovery and a USFS archeologist will be notified to determine protective measures.
- CU 2. Surveys for cultural resources will be conducted for any areas where surface disturbance is planned that were not included in the initial baseline studies.
- CU 3. Cultural sites identified as eligible for inclusion on the National Register of Historic Places will be avoided. If avoidance of cultural resources is not possible, an appropriate Historic Properties Treatment Plan will be required for the selected alternative. The Plan will allow for mitigation of potential adverse effects to the Historic Properties.
- CU 4. An approved archeologist will work with construction crews when crews are within 600 feet of the boundary of a known eligible historic cultural site. Tribal monitors may also be working with construction crews as cultural resource monitors.
- CU 5. Cultural resources monitors will evaluate avoidance measures and monitor disturbance activities in culturally sensitive areas.
- CU 6. If human remains are encountered during construction activities, all work within 300 feet of the remains will halt and the USFS will be notified immediately.
- CU 7. If the remains are Native American, USFS or BLM, whichever agency has jurisdiction, will follow the procedures set forth in 43 CFR 10, Native American Graves Protection and Repatriation Regulations. If the Native American human remains are located on state or private land, the appropriate SHPO will be notified immediately. In Nevada, Native American human remains are protected under the provisions of the Protection of Indian Burial Sites section of the Nevada Revised Statutes (NRS) in Chapter 383. The Nevada SHPO will consult with the Nevada Indian Commission and notify the appropriate Native American Tribe. Procedures for inadvertent discovery are listed under NRS 383.170. If the discovery of Native American human remains is made on State or private land in California, the California SHPO and the Native American Heritage Commission will be contacted. The Native American Heritage Commission will provide the name of a Most Likely Descendent who will then make recommendations for treatment and disposition of the remains and associated items.

Hazardous Materials and Waste (HM)

- HM 1. A Spill Prevention, Control, and Countermeasure Plan (SPCC) will be implemented during construction to prevent any spills including cleanup procedures. The SPCC will become part of the COM plan.

Recreation/Roads/Transportation (RT)

- RT 1. The use of any roads or trails will require compliance with the Carson Ranger District Motor Vehicle Use Map (MVUM), including any restrictions for seasonal use.
- RT 2. All new temporary access roads and all improvements to existing roads will comply with: 1) The Forest Service National Supplements to the FP-03 (USFS, 2010); 2) the USFS Road Construction Handbooks (FSH 7709.56 and FSH 7709.57); and, 3) the Forest Plan.

- RT 3. All new access roads (i.e., spur roads and centerline travel roads) specifically constructed for this project, including those determined to be necessary for maintenance of the transmission line, will have a physical closure installed to prevent motorized access immediately following the completion of construction and restoration. The types of closure and design specification used will be approved by the USFS prior to installation.
- RT 4. Physical barriers such as boulders or natural features designed to harmonize with the natural environment of the surrounding area will be installed to prevent unauthorized vehicle use from occurring on restored roads. The use of gates or other such structures for this purpose will be avoided unless determined necessary by the USFS.
- RT 5. Maintenance activities which cause a road to be opened to unauthorized vehicles or damage to restoration improvements will need to be assessed and barriers reinstalled as needed at the expense of NV Energy.
- RT 6. Restored roads will require a signage and monitoring plan implemented by NV Energy for compliance with the closure which will include inspecting the barricade areas to determine the effectiveness of the blockades at preventing unauthorized motorized vehicle use of the restored access roads. Signs will notify the public that construction access roads are closed and are being restored. Signs will be replaced by NV Energy if vandalism occurs to the signs.
- RT 7. If unauthorized vehicle use occurs on restored roads, barricades and reclamation would be monitored for effectiveness and remedial measures taken. Monitoring will continue until disturbed areas are successfully restored.
- RT 8. Public access will be maintained with minimal delays during the construction and maintenance of the project. If there are traffic delays, NV Energy will post delay information at National Forest portals.
- RT 9. All construction vehicle movement will be restricted to the transmission line ROW/easement, pre-designated access roads, public roads, and private roads. All existing roads will be left in a condition equal to or better than their preconstruction condition.

Visual Resources (VI)

- VI 1. Non-specular conductors will be installed to reduce visual impacts.

Fire Prevention and Response (FP)

- FP 1. Fire Prevention Plan will be implemented during construction activities to prevent and suppress fire. The Fire Prevention Plan will be included in the COM Plan.

Air Quality (AQ)

- AQ 1. Vehicle and equipment speeds will be limited to 20 miles per hour on unpaved roads and on the ROW/easement.
- AQ 2. All areas subject to ground disturbance will be watered as needed to control dust.
- AQ 3. Paved roads will be swept if visible soil material is tracked onto them by construction vehicles.
- AQ 4. Excavation and grading activities will be suspended when winds (instantaneous gusts) exceed 50 miles per hour and visible dust persists that creates a health hazard to neighboring property owners and/or visibility impacts to vehicular traffic.

1.2 DESIGN FEATURES SPECIFIC TO ALTERNATIVES

1.2.1 MITCHELL ALTERNATIVE

Water Resources

- WA 13. In order to minimize impacts to Dog Creek, existing crossings will be improved and no new road crossings will be constructed.

Recreation

- RT 10. Concurrent with construction restoration, physical barriers will be installed within the ROW area where Henness Pass/Dog Valley Road will be crossed. The barriers will be installed on the east side of the road to prevent the ROW area from being utilized for motorized travel after construction is completed. Signs will be installed to notify the public that the area is closed and under restoration. The type and design of the barriers will be approved by USFS prior to installation.

Visual Resources

- VI 2. The number of new poles will be minimized by increasing the pole span length on NFS land where the area is designated as Retention for Visual Quality Objectives as terrain allows.

Fire Prevention and Response

- FP 2. To protect forest resources and the transmission line from wildland fire, fuels reduction activities will take place along the transmission line. Fuels reduction activities will reduce canopy bulk density and interlocking crowns; remove ladder fuels; and increase the height to live crown on residual crowns. Treatment areas will occur within the 300 to 600 foot "variable-width corridor" where botanical and cultural baseline surveys have been conducted.

Trees will be thinned from below and any trees with evidence of disease or insect-infestation would be removed. Ladder fuels are described as any live or dead tree or shrub that would allow a fire to climb up from the landscape or forest floor into the tree canopy. Shrubs will also be removed from underneath the drip line of residual trees. In areas where the shrub canopy cover is greater than 60 percent outside the drip line of trees, 10 percent to 50 percent of the shrubs will be removed or mowed, leaving a mosaic pattern (e.g., 10 percent of the shrubs would be removed within a site with 60 percent shrub cover; 40 percent of the shrubs would be removed within in a site with 90 percent shrub cover).

1.2.2 PEAVINE ALTERNATIVE

Plants and Sensitive Plant Communities

- SV 9. Placement of a pole structure within the 500-meter buffer for Dog Valley ivesia may be unavoidable with the selection of the Peavine Alternative. The pole placement will be contained to the edge of the buffer to reduce potential impacts to the plant. In addition, an existing unauthorized road that currently traverses through occupied Dog Valley ivesia habitat will be closed to motorized use. Closing this road will help offset potential impacts to the Dog Valley ivesia population from the pole placement activity.

Recreation

- RT 10. Concurrent with construction restoration, physical barriers will be installed within the ROW area where Henness Pass/Dog Valley Road will be crossed. The barriers will be installed on the east side of the road to prevent the ROW area from being utilized for motorized travel after construction is completed. Signs will be installed to notify the public that the area is closed and under restoration. The type and design of the barriers will be approved by USFS prior to installation.

Visual Resources

- VI 2. The number of new poles will be minimized by increasing the pole span length on NFS land where the area is designated as Retention for Visual Quality Objectives as terrain allows.

Fire Prevention and Response

- FP 2. To protect forest resources and the transmission line from wildland fire, fuels reduction activities will take place along the transmission line. Fuels reduction activities will reduce canopy bulk density and interlocking crowns; remove ladder fuels; and increase the height to live crown on residual crowns. Treatment areas will occur within the 300 to 600 foot "variable-width corridor" where botanical and cultural baseline surveys have been conducted.

Trees will be thinned from below and any trees with evidence of disease or insect-infestation would be removed. Ladder fuels are described as any live or dead tree or shrub that would allow a fire to climb up from the landscape or forest floor into the tree canopy. Shrubs will also be removed from underneath the drip line of residual trees. In areas where the shrub canopy cover is greater than 60 percent outside the drip line of trees, 10 percent to 50 percent of the shrubs will be removed or mowed, leaving a mosaic pattern (e.g., 10 percent of the shrubs would be removed within a site with 60 percent shrub cover; 40 percent of the shrubs would be removed within in a site with 90 percent shrub cover).

1.2.3 POEVILLE ALTERNATIVE

Cultural Resources

- CU 8. In front of the Peavine Ranch, the new transmission line conductors will be installed (approximately 65 feet instead of current 40 feet) on the poles, resulting in less visual impact than the existing poles with electrical and phone wires.
- CU 9. Pole placement along the existing distribution line in front of Peavine Ranch will be placed so they are more compatible with the landscape and not in direct view of the Ranch House.
- CU 10. Work with the NV Bell to replace the heavy "black" telephone line that is presently wrapped and to co-locate telephone and power on the same poles to reduce visual range from the Peavine Ranch House.
- CU 11. Additional mitigation strategies at this site may include clean-up of all the debris, natural and frontage, inspection of drainage system (both directions), possible corrections of drainage problems, installation of gates at property and frontage fencing for improved security, and the addition of landscape (trees) of the same species after removal of one of the trees that was planted as mitigation as it is been pruned to half its normal shape.

- CU 12. Other possible mitigation measures include off-site and public participation; an expanded ranching context for the area surrounding Peavine Ranch with emphasis on the development of ranching within this geographic area; and a State historical marker well away from the Peavine Ranch which discusses ranching in general in the area.

1.2.4 PEAVINE/POEVILLE ALTERNATIVE

Plants and Sensitive Plant Communities

- SV 9. Placement of a pole structure within the 500-meter buffer for Dog Valley ivesia may be unavoidable with the selection of the Peavine/Poeville Alternative. The pole placement will be contained to the edge of the buffer to reduce potential impacts to the plant. In addition, an existing unauthorized road that currently traverses through occupied Dog Valley ivesia habitat will be closed to motorized use. Closing this road will help offset potential impacts to the Dog Valley ivesia population from the pole placement activity.

Visual Resources

- VI 2. The number of new poles will be minimized by increasing the pole span length on NFS land where the area is designated as Retention for Visual Quality Objectives as terrain allows.

APPENDIX C

VISUAL SIMULATIONS

KOP 1 (California Substation – South)
Existing Conditions



KOP 1 (California Substation – South)
Visual Simulation



KOP 2 (California Substation – West)
Existing Conditions



KOP 2 (California Substation – West)
Visual Simulation



KOP 3 (Hennes Pass/Dog Valley Road)
Existing Conditions



KOP 3 (Henness Pass/Dog Valley Road)
Visual Simulation – Mitchell Alternative



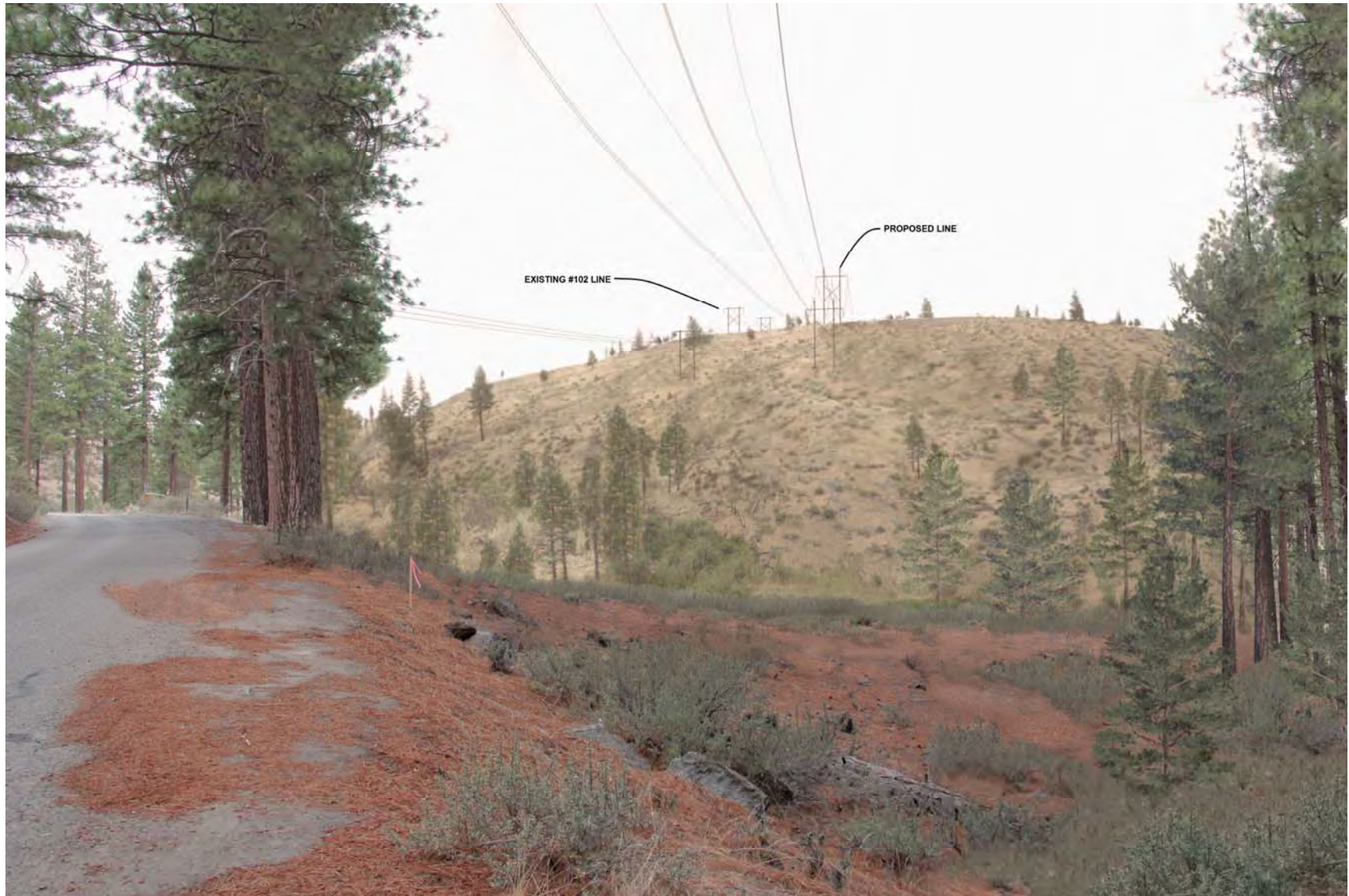
KOP 3 (Hennes Pass/Dog Valley Road)
Visual Simulation – Peavine Alternative



KOP 4 (Forest Boundary - West)
Existing Conditions



KOP 4 (Forest Boundary - West)
Visual Simulation



KOP 5 (Forest Boundary)
Existing Conditions



KOP 5 (Forest Boundary)
Visual Simulation



KOP 7 (Forest Route 41192 – North)
Existing Conditions



KOP 7 (Forest Route 41192 – North)
Visual Simulation



KOP 9 (Peavine Ranch)
Existing Conditions



KOP 9 (Peavine Ranch)
Visual Simulation



KOP 10 (Peavine Ranch – Southwest)
Existing Conditions



KOP 10 (Peavine Ranch – Southwest)
Visual Simulation



KOP 11 (Peavine Road)
Existing Conditions



KOP 11 (Peavine Road)
Visual Simulation



KOP 12 (Stead Trailhead)
Existing Conditions



KOP 12 (Stead Trailhead)
Visual Simulation



KOP 13 (Trail Drive – East)
Existing Conditions



KOP 13 (Trail Drive – East)
Visual Simulation



KOP 14 (Trail Drive – West)
Existing Conditions



KOP 14 (Trail Drive – West)
Visual Simulation



KOP 15 (Truckee River Bridge)
Existing Conditions



KOP 15 (Truckee River Bridge)
Visual Simulation



KOP 16 (Verdi Library Parking Lot – West)
Existing Conditions



KOP 16 (Verdi Library Parking Lot – West)
Visual Simulation



KOP 17 (Verdi Library Parking Lot – East)
Existing Conditions



KOP 17 (Verdi Library Parking Lot – East)
Visual Simulation



APPENDIX D

PROJECT MAILING LIST

A letter announcing the Notice of Availability (NOA) of the Draft EIS has been distributed to the following mailing list of agencies, tribes, elected officials, interested organizations, businesses, and individuals that provided comment during the scoping period or own property within 750 feet of an action alternative. A copy of copies of the Draft EIS (hardcopy and/or compact disk) has been sent to select agencies and organizations and to those requesting copies during scoping.

Federal Agencies

Advisory Council on Historic Preservation

Army Corps of Engineers, Sacramento District

Department of Agriculture

- Forest Service, Ecosystem Management Coordination
- Forest Service, Humboldt-Toiyabe National Forest, Carson Ranger District
- Forest Service, Lake Tahoe Basin Management Unit
- Forest Service, Tahoe National Forest, Sierraville Ranger District
- Forest Service, Tahoe National Forest, Truckee Ranger District
- Forest Service, Region 4

Fred Noack

- National Agricultural Library, Head, Acquisitions & Serials Branch

Department of the Interior

- Bureau of Land Management, Eagle Lake Field Office

Ken Collum, Field Manager

- Bureau of Land Management, Carson City District Office
- Office of Policy, Management, and Budget, Office of Environmental Policy and Compliance

Headquarters, Washington D.C.

Patricia S. Port, Regional Environmental Officer, San Francisco Region

- U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office

Edward D. Koch, State Supervisor

Environmental Protection Agency

- Region 9 (Pacific Southwest), Environmental Reviews Office

Thomas Plenys

Kathleen Goforth

State Agencies

California Department of Fish and Wildlife, CA

- California Department of Fish and Wildlife Headquarters
- Wildlife Conservation Board
- North Central Region

Tina Bartlett, Regional Manager

California Department of Parks and Recreation, CA

- California Office of Historic Preservation
Carol Roland-Nawi, State Historic Preservation Officer

California Department of Transportation, CA

California Environmental Protection Agency, CA

- Lahontan Regional Water Quality Control Board
Douglas Cushman, Senior Water Resources Control Engineer
George Cella, Engineering Geologist

California Public Utility Commission, CA

- John Boccio, Energy Division

Governor's Office of Planning and Research, CA

- State Clearinghouse

Nevada Department of Conservation and Natural Resources, NV

- State Clearinghouse
- State Historic Preservation Office

Nevada Department of Transportation, NV

Nevada Department of Wildlife, NV

- Mark Freese, Supervisory Habitat Biologist
- Tony Wasley, Director
- Kim Toulouse, Volunteer Program Coordinator
- Carl Lackey, Biologist

Nevada Division of Environmental Protection, NV

Nevada Division of Forestry, NV

- John Copeland, Forester

Nevada Public Utility Commission, NV

- Mark Harris, Electrical Engineer

Nevada State Library and Archives

- Kathy Edwards

Native American Tribes

Pyramid Lake Paiute Tribe

- Ben Aleck, Cultural Resources Director
- Elwood Lowery, Chairman
- John Mosley, Environmental Director

Reno-Sparks Indian Colony

- Arlan Melendez, Tribal Chairman

Washoe Tribe of Nevada & California

- Jennifer Johnson, Environmental Specialist II
- Wanda Batchelor

City, County, and Local Agencies

Northern Sierra Air Quality Management District, CA

- Air District Main Office
- Northern Field Office

Sierra County Board of Supervisors, CA

Sierra County Department of Public Works, CA

Sierra County Planning Department, CA

- Tim Beals, Director

City of Reno Community Development, NV

- Bill Thomas, Assistant City Manager

Washoe County Community Development, NV

- Bill Whitney, Director

Washoe County Community Services Department, NV

- Regional Parks and Open Space

Washoe County Public Works Department, NV

- Engineering and Capital Projects Division

Washoe County Treasurer's Office, NV

- Tammi Davis, Treasurer

City and County Representatives

Reno City Council Member, Dwight Dortch

Reno City Council Member, Neoma Jardon

Washoe County Commissioner, Bonnie Weber

Washoe County Commissioner, Kitty Jung

Organizations

Anderson Acres Association

Aspen Delineation Project

- David Burton

Boy Scouts of America

- Nevada Area Council

California Fire Safe Council, Inc.

California Forestry Association

- Phil Aune

Dust Devils

- Dean Chaney

Federal National Mortgage Association

Health Education & Life

Hills Angels

- Phil Bender

Kinder Morgan

- D. R. Quinn

Liberty Baptist Church of Reno

North Valleys Library

Northwest Reno Library

Poedunks

- Dale Beesmer
- Carl Adams

Reno Fire Department

- Marty Scheuerman

Sierra Club

- Toiyabe Chapter
 - Dennis Ghiglieri
 - Marjorie Sill
 - Rose Strickland
 - David von Seggern

Sierra County Fire Safe and Watershed Council

- Cindy Noble

Sierra Forest Legacy

- Craig Thomas, Conservation Director

Southwest Veterinary Hospital, Profit Sharing Plan

Truckee Meadows Fire Protection District

- Charles Moore, Chief

Truckee Meadows Water Authority

University of Nevada Cooperative Extension

- Ed Smith

Verdi Public Library

Washoe County School District

- District Board
Tom Ciesynski
- Verdi Elementary School
Gloria Geil, Principal

Western Watersheds Project

- Katie Fite, Biodiversity Director

Businesses

Bayfish LLC

Gardner Properties LLC

Hotel-Casino Management Inc

Lifestyle Homes TND LLC

Mountain Peak Homes, LLC

Nevada Bell

P51 LLC

P51 LLC, et al

Peavine Pines LLC

Pioneer Inn Association Ltd Partnership

R&H Ventures LLC Series A

Redrock Road LLC

- Andrew Wernette

Reno Red Rock LLC

River Bend Investments LLC

Schlosser Forge Company

Sierra Front LLC

Sierra Mountain Mortgage, Inc.

- David Giacomini

Sierra Pacific Power Co.

- Land Department

Small LLC

- Samantha & Alan Glen

Union Pacific Railroad Company

- Property Tax Department

Utilities Inc. of Nevada

- John Haynes

Valley-Tech Investing Group LLC

Verdi Vision LLC

West Meadows Investments LLC

Individuals

Anjali D Webster, et al.

Arthene L McDonald-Saicheck, et al.

Brian & Dorothy McCormack Family Trust

Byron H Brown Jr, et al.

Charlene R Christman, et al.

Cole Family Trust

Cook 2011 Family Trust

Cushman Family Trust

Cynthia M Brown, et al.

David A Giacomini Trust, et al.

Dawn M Rutigliano, et al.

Dayan W Paul, et al.

Deborah Davis, et al.

Donna L Anderson, et al.
Eric & Beverly S Knudsen Trust
Fernando & Adelia Canon, et al.
Frank C Gonthier Trust
Frank V Love Family Trust
H A B Living Trust
Herbert Kronish Trust
Herschbach Trust
Howard & Carol Thomas Family Trust
Jackston Living Trust
James R & Susan M Davenport Family Trust
Jimmie R Martin Living Trust
Jonathan J Rubinstein Trust, et al.
Josephine L Sweeney Trust, et al.
Kelly Family 1997 Survivors Trust
Kronish Testamentary Trust
Larry S Duerr & Lani V Knapp Family Trust
Lela S Terry 1991 Family Trust
Marilyn L Costa Trust
Marvin Oshan, et al.
McKenzie K Harrigan Irrevocable Trust, et al.
McNeilly Living Trust
Michael G & Cynthia M Harrigan Family Trust
Michael R & Kathy A Taylor Trust
Neerhout Family Trust
Peter Echeverria Family Ltd Partnership
Pitchford Family Trust
Raymond J Poncia Jr Family Trust
RD & TR Long Family 1997 Trust

Robert J Lissner Conservancy Trust

Samantha Glen Living Trust

Scott Farrell Trust

Seymour Family Trust

SMM 401K Plan

Spraggins Family Trust

Stoker Family Trust

T & M Whalley Trust

Terri Elliott, et al.

Timothy J Henderson Trust

Vasenden Family Trust

Vernon A & La Donna J Buus Trust

Widmer Living Trust

William H Markley Revocable Trust

Gary L & Robbin A Altman

Anthony & Elna Adams

Joan K Anglin

Paul R & Elizabeth L Arnold

Ricardo D Arrate

Jason D Bjorkman

Scott & Cindy S Burner

Paul G & Christine P Burr

Fernando & Adelia Cannon

David & Michelle Churchill

David V Crowell

Michael Daniels

John H & Sharon R Davidson

Dennis A & Rose Marie Devine

Brian E & Iwalani F Dyck

Judith Ann Grafton Eisele

Allyn Emery

Keith N Everett

Francis C & Terri S Farley

Samuel Forrester

Michael Fronefield

Paul A & Elaine H Gademsky

Jerald & Paulette Ganshorn

Troy D & Patricia Gavin

James R & Linda L Gotschall

Larry Gottula

Dennis R & Frances A Harden

Dixie A Hawkins

June Haycock-Meese

Michael & Laurie Hayes

Michael B & Sandra L Jones

Ronald E & Gayle A Kmetovicz

Robert C Krone

Laurie Laguna

Greg & Heidi Lawson

Greg S Lawson

Joan Lewis

Richard W & Janet G Loverde

Jeffrey D & Elizabeth G Lovig

Stan Lucas

Rene M Mabe

Bill D Maddux

John R McGathey

Patrick & Kathie Mead

Jett D & Priscila B Mora
Dante & MA Luisa T Morales
Paul & Jane Mucklow
Paul & Daphne Mullen
Marc J & Tami R Neville
John D & Donnelle M O'Neill
Pablo Panlilio
Megan & Jeffrey Parsons
Bruce R Peterson
Earl & Nancy Piercy
Mike Pierczyk
Gregory V Powning
David G & Terrie E Powning
Mary C Powning
Roger Puccinelli
Jole Ana Rector
Hugh M & Linda R Redpath
Timothy A & Theresa Rosemore
Francesca M Santiago
John W & Marjolaine M Scott
Elek H Sebestyen
John Selcer
Jeff A & Sheri Sepahpour
Rhonda G Serr
Ike Shaw
Robert C Skamel
Jeffrey A & Anne M Solvason
Neal St John
Michael D & Cheryl L Stander

Timothy J Stoffel

Kevin M Strawn

Taryn Stutler

Chistine & Ziggy Terelak

Ronald E Thompson

John Tiedjens

Craig L & Gail A Vandelist

Michael A & Shernaaz M Webster

Robert Wehe

Nicky Weiss

Wade A Ybarra

Victor & Rebecca Zatarain

David & Cheryl Zotter

Vernon & Judy Anderson

Nicole Appel

Linda Averett

Wendy Baroli

Channelle Baroli

Louise Bayard de Volo

Penny L Beck

Philip Bender

Bruce Bernard

Joan Blumenfeld

Connie Bresette

John & Kathryn Burrows

Frank Bursick

Scott Carruth

Catherine Clark

Rob Cofer

Nyla Davis

Dave Della

Alan M Evans

Karen Farroni

Janice & Patrick Flanagan

Danielle Gustafson

Mae Gustin

Brad & Vicki Haglund

Jill Heaton

Katie Hinckley

Mick Hitchcock

Richard & Lori Jensen

Curtis Johnson

Bruce & Marcia Johnson

Jared Jones

Bruce Jorgensen

Sebastian Kimura

Donna Knipschild

Edward Kolodziej

Frank & Caroline Kurnik

Jan & Jim Loverin

John Marshall

Jon McDonald

Walt McEnerney

Linda McIntyre

Fred & Marisa Miller

William T Miller

Stephem Minard

Ross Mortensen

Larry Nykaza

Joyce Ozburn

Vivian Peng

Gary & Jan Phillips

Mike & Kelli Pilcher

Michael Rosenauer

Rafael & Ruth Rosenfeld

Richard & Terry Ruppert

James Russell

Mark & Mary Ryan

Scott Samon

Joseph & Michelle Shenck

David Sparks

W. H. & Marian Teller

Sandra L Tutak

Robert Tye

Regina & Clayton Wise

Dennis Wong

Karen Young